EXTENSION

OFFICE OF THE PRINCIPAL
3 FEB 1962
KOVILPATTI
RURAL EXTENSION TRAINING CENTRE
CD 593
E.95.
1843.

CD553
R.E.T.C. LIBRARY
E.95.
1843
KOVILPATTI.

FARM AND FARM HOME MAGAZINE January, 1962

USEFUL **BULLETINS** FOR **FARMERS**

Tips on better farming	No. 3	50 nP.
,, ,, ,,	No. 4	25 nP.
,, ,, ,,	No. 5	50 nP.
Manures and manuring		25 nP.
Rice cultivation in India		50 nP.
The mango in India		50 nP.
Oranges, lemons and limes in India		50 nP.
Feeding goats for milk production		25 nP.
Our leafy vegetables		50 nP.
Lac cultivation in India		50 nP.
Farm implements you should have		25 nP.
Soil conservation in India		50 nP.

Safflower cultivation in India	25 nP.
Grape culture in India	50 nP.
Home preservation of fruits	50 nP.
Pepper cultivation in India	50 nP.
Betelvine cultivation in India	50 nP.
Wind Erosion, wind-breaks and shelter-belts	50 nP.
Lemongrass in India	25 nP.
Nut-tree culture in India	50 nP.
Farm accounts	25 nP.
Growing vegetables in home gardens of Delhi	50 nP.

A COMPLETE LIST OF FARM PUBLICATIONS IS AVAILABLE ON REQUEST

Please send your order to :

THE BUSINESS MANAGER
FARM INFORMATION UNIT
DIRECTORATE OF EXTENSION
MINISTRY OF FOOD AND AGRICULTURE
KRISHI BHAVAN NEW DELHI

CP: 503
F. 75.
1843.
314 4/4

THE PICTURE ON THE COVER

Whether it is a small bakhari, *like the one in the picture, or a big godown, where farmers store their grain, they have to take all precautions to safeguard it against storage enemies.*

—Photo by Gurcharan Singh

OFFICE OF THE PRINCIPAL
3 - FEB 1962
KOVILPATTI.
RURAL EXTENSION TRAINING CENTRE

EXTENSION

THE FARM AND FARM HOME MAGAZINE

Vol. II January, 1962 No. 7

CONTENTS

FARM CROPS

This way, canes sprout better ... 9
Get back all the grain you store ... 17
Use your autumn potatoes for spring planting ... 20
The Kerala farmers' fertilizer guide ... 21
What makes a good mother palm ... 23

PESTICIDES

Be safe with pesticides ... 2
Spray your coconuts now ... 8

FARM IMPLEMENT

A harrow for the plains and the hills ... 11

POULTRY

How are your hatching results ? ... 13
No cereals in this poultry feed ... 12

FARM HOME

Don't let nutrients walk out of vegetables ... 25

FARM INFORMATION UNIT
DIRECTORATE OF EXTENSION, MINISTRY OF FOOD AND AGRICULTURE, GOVT. OF INDIA, NEW DELHI

Principal Editor	M.G. Kamath
Editor	T.C. Roy
Associates	Lal Karamchandani
	Sham Govind Ranade
	Shukla Das
Art Editor	Pratap Deb
Business Manager	R.D. Khanna

Annual Subscription : Rs. 5.50
Single Copy : 50 nP.

Be **SAFE** with PESTICIDES

By D. B. REDDY

PESTICIDES are pesticides because they are poisons. But what you should not forget is that they are poisons for higher animals too, including you !

Hence, be careful how you handle, store and use these pesticides. In other words, be safe with pesticides.

To be safe with pesticides, you should know all the precautions you need to take in handling or using them.

When you buy a pesticide, read the label carefully, and follow the instructions given on it; keep the pesticide in a labelled container only.

Store pesticides under a lock in a safe place and out of reach of children or other persons who don't know about it, and pets; *never* store pesticides near food-stuffs or medicines.

CD553

In case you have the pesticide in bags, do not tear open the bags, but cut them open with a knife.

Use protective clothing and other devices while handling dangerous pesticides. This is a *must*.

Prepare spray solutions from concetrated and dangerous pesticides in deep bottomed vessels. Use long handled mixers. This will protect you from the splashes of the pesticide. It will also be easy for you to stir the solution standing up.

Wash your hands thoroughly with soap and water every time

(i) you fill the sprayer or duster with pesticides;

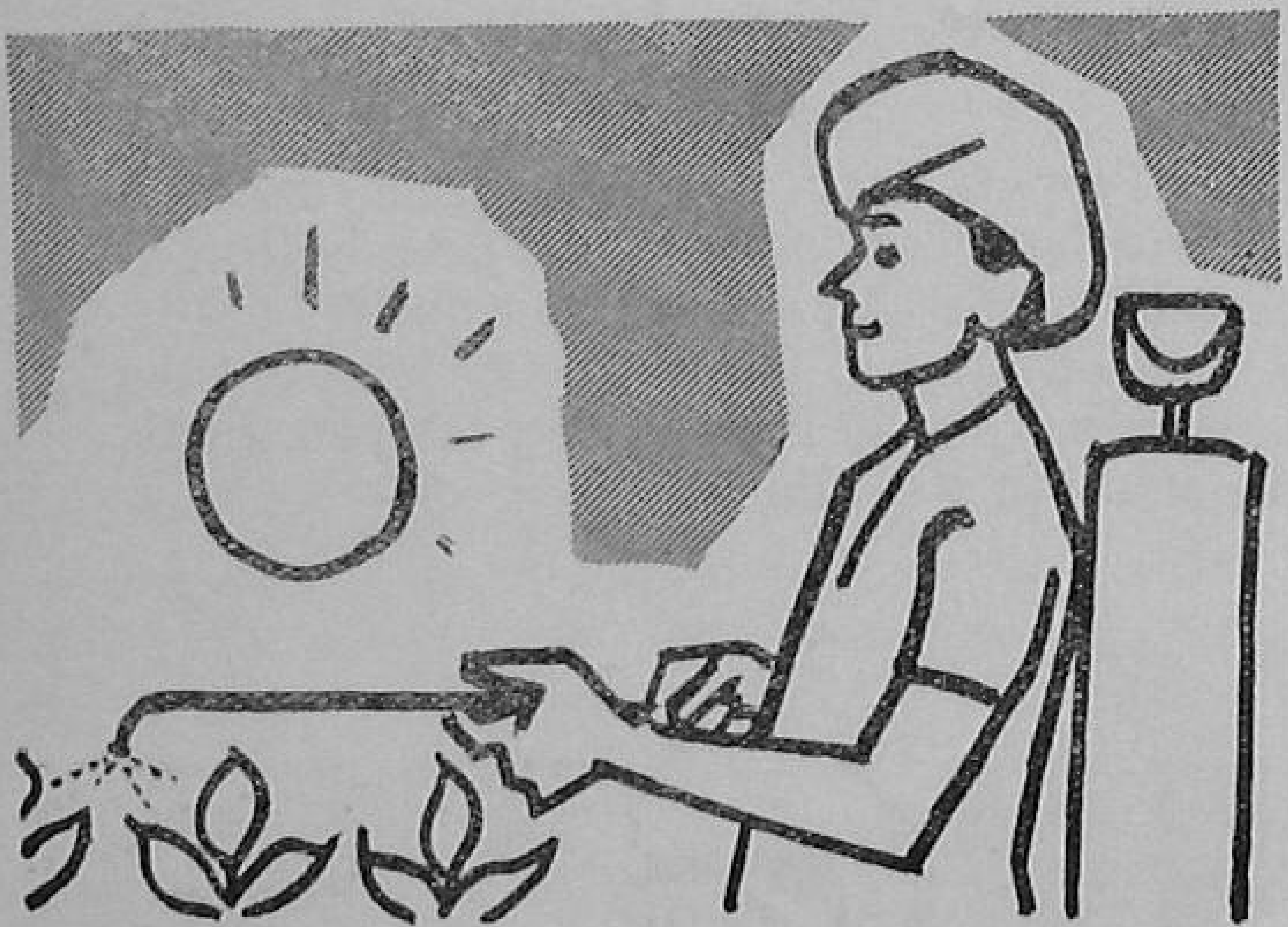
(ii) before eating, drinking or smoking; and

(iii) at the end of the day's work.

Do not use the empty containers of dangerous pesticides for any other purpose. If you have no use for such containers, dispose them off.

Properly dispose of the water or any other liquid used in the washing of the equipment and of the mixing vessels. Scatter it over barren land or throw it in a deep pit.

Use separate clothes for working with pesticides. Wash and change them as often as possible.



Do not work or allow the operator to work for more than eight hours a day. Have the operators engaged in the handling of dangerous pesticides checked by a doctor periodically.

Do not spray or dust dangerous pesticides in lakes, ponds or rivers if the water from these sources is used for drinking.

Do not keep your food and drinking water near the pesticides and in the area of operation.

Do not use pesticides on farm animals without consulting your veterinary doctor.

←

It is a safe rule to keep a first aid box, phenobarbitol, amylnitrite pearls, atropine sulphate 1/100 grain tablets and the 'universal antidote' handy while handling and using pesticides.

If symptoms of illness occur during or shortly after spraying or dusting, call a physician or get the patient to the nearest hospital immediately.

FIRST AID

While you are waiting for the doctor to arrive or till the patient is taken to a hospital or dispensary, use the following first aid methods.

SWALLOWED POISONS

If the poison has been swallowed, empty the stomach of the patient as soon as possible. To do this, give him an 'emetic' of warm salt solution, ground mustard and water (1 teaspoonful in a glass of warm water) or 'ipecac' (1 teaspoonful in a glass of warm water). You can also make the patient vomit by tickling his throat or inserting the index finger far down the throat.

Do not make the patient vomit if he is in a coma, or is unconscious or having convulsions, and also, when the patient has swallowed petroleum products, such as kerosene, gasoline, etc., or corrosive acids or caustic alkalies (symptoms : severe pain, burning sensation in the mouth and throat and vomitting).

After the stomach has been emptied as completely as possible, give him a 'demulcent' such as raw eggs, milk or a thin flour paste. Poison taken through the mouth can be absorbed by medical carbon (animal charcoal), which will also lessen the irritation to membrances of the digestive canal.

If the poison taken, is known, try emergency treatment immediately.

INHALED POISONS

1. Carry the patient (do not let him walk) to fresh air immediately.
2. Open all doors and windows.
3. Loosen all tight clothing.
4. Apply artificial respiration if breathing is stopped or is irregular. Avoid too much of pressure on the chest.
5. Prevent the patient getting chill; wrap him in a blanket and keep him as quiet as possible.
6. If the patient is convulsing, keep him in bed in a dark room. Avoid noise.
7. Do not give alcohol in any form to him.

SKIN CONTAMINATION

1. Wash the skin with warm soapy water.
2. Apply a stream of water on the skin while removing the clothing.
3. Cleanse the skin thoroughly with water.
4. *Wash quickly.* This is most important in reducing the injury to the skin.

EYE CONTAMINATION

1. Hold the eye-lids open.
2. Wash the eyes gently with a stream of running water immediately. If you delay by even a few seconds, injury will be greater.
3. Continue washing until a physician arrives.
4. Do not use chemicals. They may make the injury worse.

PREVENTION FROM COLLAPSE

1. Cover the patient with a light blanket; raise the foot of the bed; do not use a hot water bottle.
2. Give strong tea or coffee (tea is useful for children).
3. Do not exhaust the patient by too much or too vigorous a treatment.
4. A physician or a trained dispensary chemist can do these :

   (a) Apply elastic bands to the arms and legs.

   (b) Give hypodermic injection of stimulants, such as caffeine and epinephrine.

   (c) Give five per cent dextrose solution intravenously.

   (d) Give a blood or plasma transfusion.

DON'T DO THESE

some wrong ways

Do not keep your food or drinking water in the area of operation

Do not blow, suck or apply the mouth to any spraying equipment

# of handling pesticides

Do not mix the chemicals with your hands

Do not eat or smoke while spraying

Spray your coconuts now

IN areas where root and leaf disease appear on coconut palms during January-February make arrangements for spraying the palms now. You can use Bordeaux mixture or a solution of any one of the copper fungicides available in the market, for spraying. Repeat the spraying in April-May and again in September-October.

To make the spraying effective take these precautions : clean the crown of the palms thoroughly ; cut off the affected areas of the leaves of diseased palms and burn ; replace all old spathes, stipules and other parts of the sprayer if those are not in good condition.

If you can't make your own arrangements for spraying, contact your Agricultural Officer.

This way CANES sprout better

ONE main reason for low yields of sugarcane in the North is poor germination of setts. Because of low temperature at the time of planting and sudden hot conditions later, germination of cane setts here is hardly 30 to 40 per cent as against 80 to 90 per cent in the South.

Studies at the Sugarcane Research Institute, Ludhiana, Punjab, have shown that if germination can be improved the yield can also be improved. And, germination can be improved by treating sugarcane setts with an organo-mercurial fungicide. With such a treatment, germination improved by 25 to 30 per cent and per acre yield increased by 90 to 100 maunds.

You can use any one of the many such fungicides now available in the market. 'Agallol' (Bayer Agri-Chem), 'Aretan' (Imperial Chemical Industry) and 'Shell Seed Dresser, 'W' (Burmah-Shell) are some of them. You have to treat sugarcane setts by dipping them in a five per cent solution of the fungicide. One pound of fungicide will be required to treat the seed setts for an acre.

The Punjab farmers too can harvest a rich cane crop if they improve the germination of setts

Germination can be improved by treating the setts before planting

A pound of the chemical will cost you Rs. 4.50 to 5.50.

This is how you treat the seed setts.

Prepare the solution in two lots. Take 100 pounds of water and half a pound of fungicide. Dissolve the fungicide first in a small quantity of water, stirring well with a piece of cane or a stick (Don't dip your hand in the solution). Later on add the remaining water to the solution. This will give you a five per cent solution.

Put the cane setts in a small basket. Dip the basket in the solution and take it out. To avoid wastage, keep this basket in a bigger one to drip into a bucket. You can then re-use the solution that has dripped from the setts.

When the solution gets muddy and smaller in volume, use the other lot (another half pound in 100 pounds of water).

Plant the setts.

The fungicides you use are very poisonous and, hence, handle them with great care. Don't use containers in which the solution has been prepared for any other purpose. Never pour the used-up solution near any well or water source. Do not allow any worker with bruised or wounded hands to handle the solution. After treatment, wash the hands and legs twice or thrice.

Treat the cane setts this way. You will be spending four to six rupees in the process, but you will get many more maunds of cane as your reward.

A harrow

for the plains and the hills

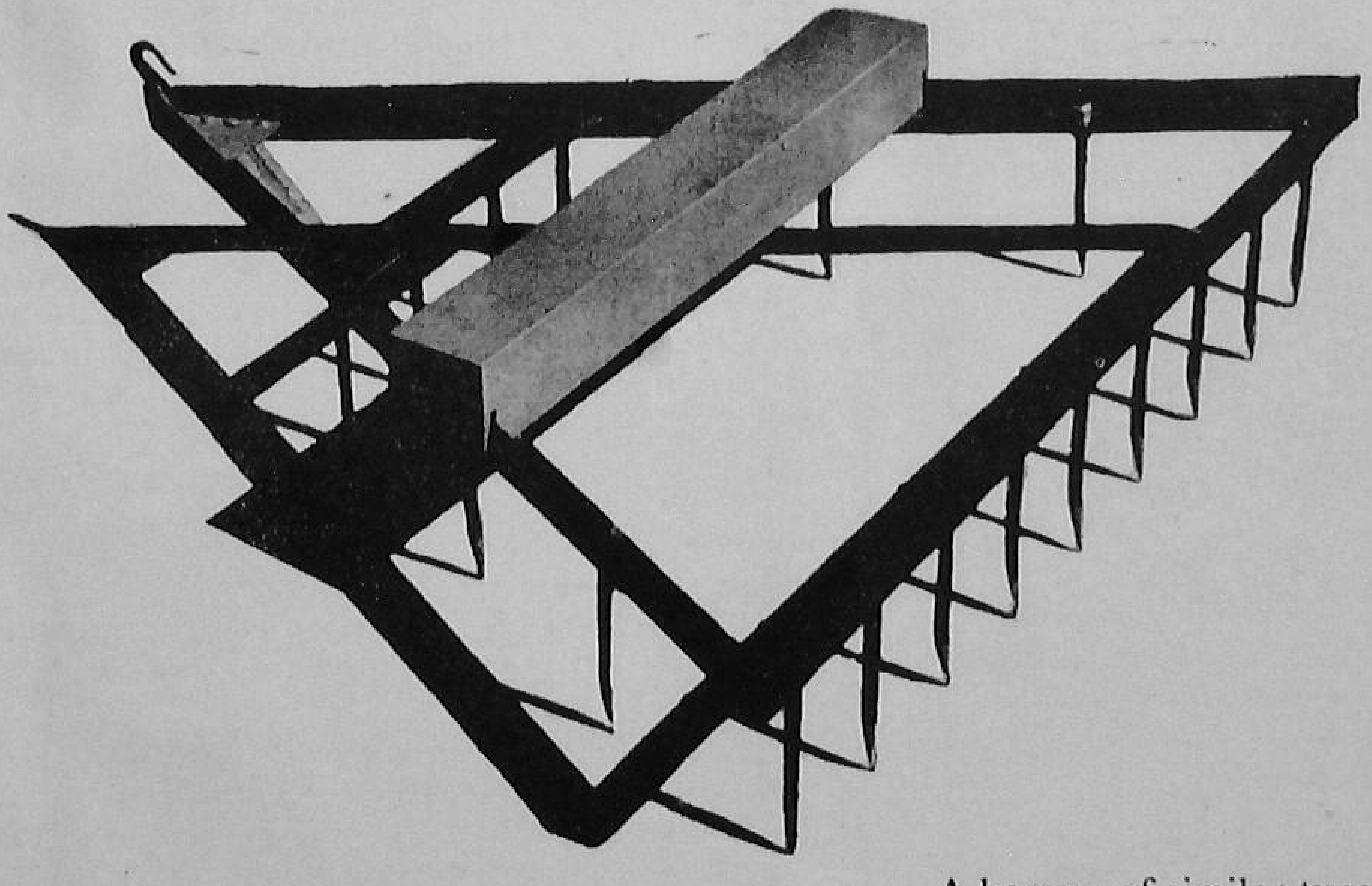
By D.N. KHERDEKAR

AN implement that will be very useful for smoothening the lands, breaking up the clods, covering seed after sowing and for interculture is the triangular spike-toothed harrow. It is very popular with the Punjab farmers.

The implement has a wooden or steel frame—triangular in shape. To this frame are attached 10 to 15 pointed pegs. These pegs are fixed by means of nuts. These pegs can be removed for straightening or sharpening when bent or worn out.

The harrow has a hook in front with which it is yoked. An average pair of bullocks can easily pull the harrow. By fixing two wooden planks on the harrow, a man can ride on it.

It is simple, and can be made or repaired by a village blacksmith. For preparing the field for *rabi* crop, you will find this harrow useful.



A harrow of similar type but smaller in size has been developed by the Nahan Factory, Himachal Pradesh. Such a harrow has been found suitable for hill areas.

A triangular spike-toothed harrow will cost you Rs. 30 to 45, depending upon the material used for the frame.

If you have been using the standard all-mash method of feeding your poultry birds, you have been making up the feed with two thirds of cereals.

NO CEREALS IN THIS POULTRY FEED

Recent research at the Government Agricultural College and Research Institute, Ludhiana (Punjab), now shows that you can have a poultry ration without any cereal in it.

At the Institute, various mashes were tried out. Of them, this one gave the best results.

Wheat bran	10	parts by weight
Groundnut cake	15	,,
Meat-meal	10	,,
Corn gluten	20	,,
Rice polish	20	,,
Penicillin mycelia	5	,,
Molasses	15	,,
Bone-meal	1	,,
Ground limestone	3	,,
Salt	0.5	,,
Manganese sulphate	10 grams	
Vitamin A	0.5 gram	
Vitamin D 3	0.1 gram	

With this mash, it was found that the body weight of the chicks at eigth week was better than that fed with the standard ration. The cost of this ration was also very much lower than the mash prepared with cereal.

It was seen that if poultry birds were fed with the mash, there was no need to feed grains separately.

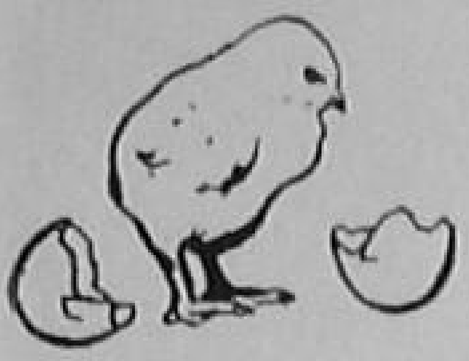
The mash can be used for growth as much as for egg-laying.

Since the mash contains synthetic vitamins A and D 3 in powder form (which is available in the market), there's no need to feed birds either with greens or shark liver oil.

By taking to this mash for feeding your birds, you will be saving the grains which can be used for human consumption.

—*S.G.I.*

How are your



HATCHING results?

By S. G. IYER

Do you keep 'hatchability' records of your hens ?

If you keep 20 fertile eggs from a hen for hatching, and 18 of them hatch out, you say that this hen's hatchability is 90 per cent. This percentage is a good one, and you should try and see that you always get this hatchability from your hens.

A hatching result of nine out of ten eggs is what you should expect

When you keep the same cock in the breeding pen for a number of years, hatchability goes down. Hence, make it a rule to put new cocks once every two or three years in the pens. Also, when you cross two breeds, you get better hatchability.

You can improve the hatchability of your flock by continuously selecting birds which have a good hatchability record for breeding purposes.

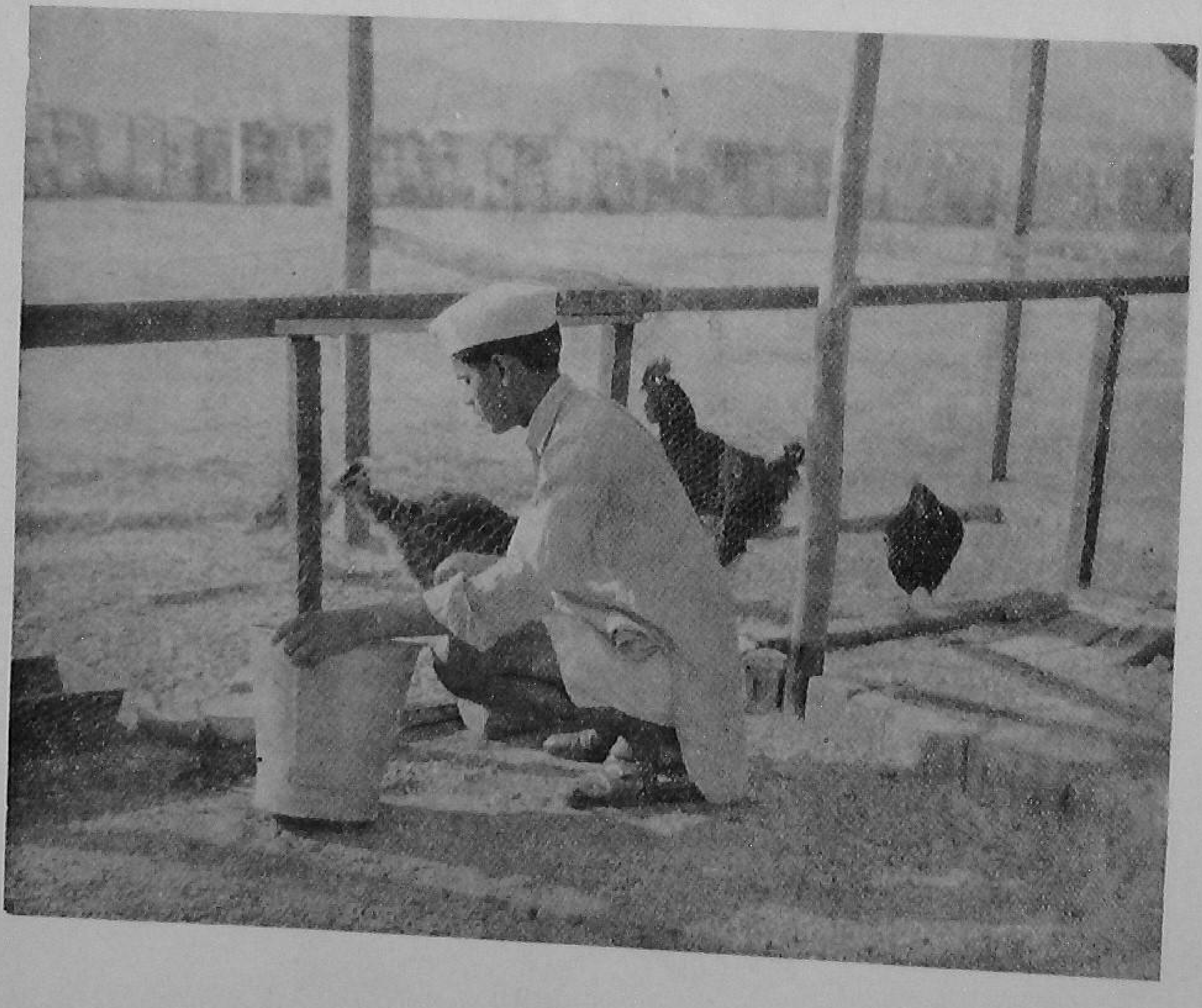
AGE

There are many other things which affect hatchability in birds. Age is one. Normally, pullets give better hatchability than the older birds. If you select good hatchers from among these birds in the first year, you will get good hatchability from them in the following years too. Birds which are poor hatchers in the first year remain so in the subsequent years also.

FEEDING

If you are giving your breeding birds a feed which is not balanced, or when the feed

Big eggs or small—proper feeding makes all the difference



lacks in certain minerals like manganese, hatchability becomes poor.

Separated milk given as a drink in addition to fish-meal or meat-meal in the ration improves hatchability.

For good hatchability, the shell must be sound. Hence, provide enough calcium (lime) through ground limestone or oyster shell in the mash. The embryo inside the egg will also make use of the calcium to build its bones.

MANAGEMENT

Hatchability will be good only if you are not only careful in feeding but also in the management of your birds. Birds need exercise too. Give them enough space for this in the runs. An acre area would be sufficient for 200 birds.

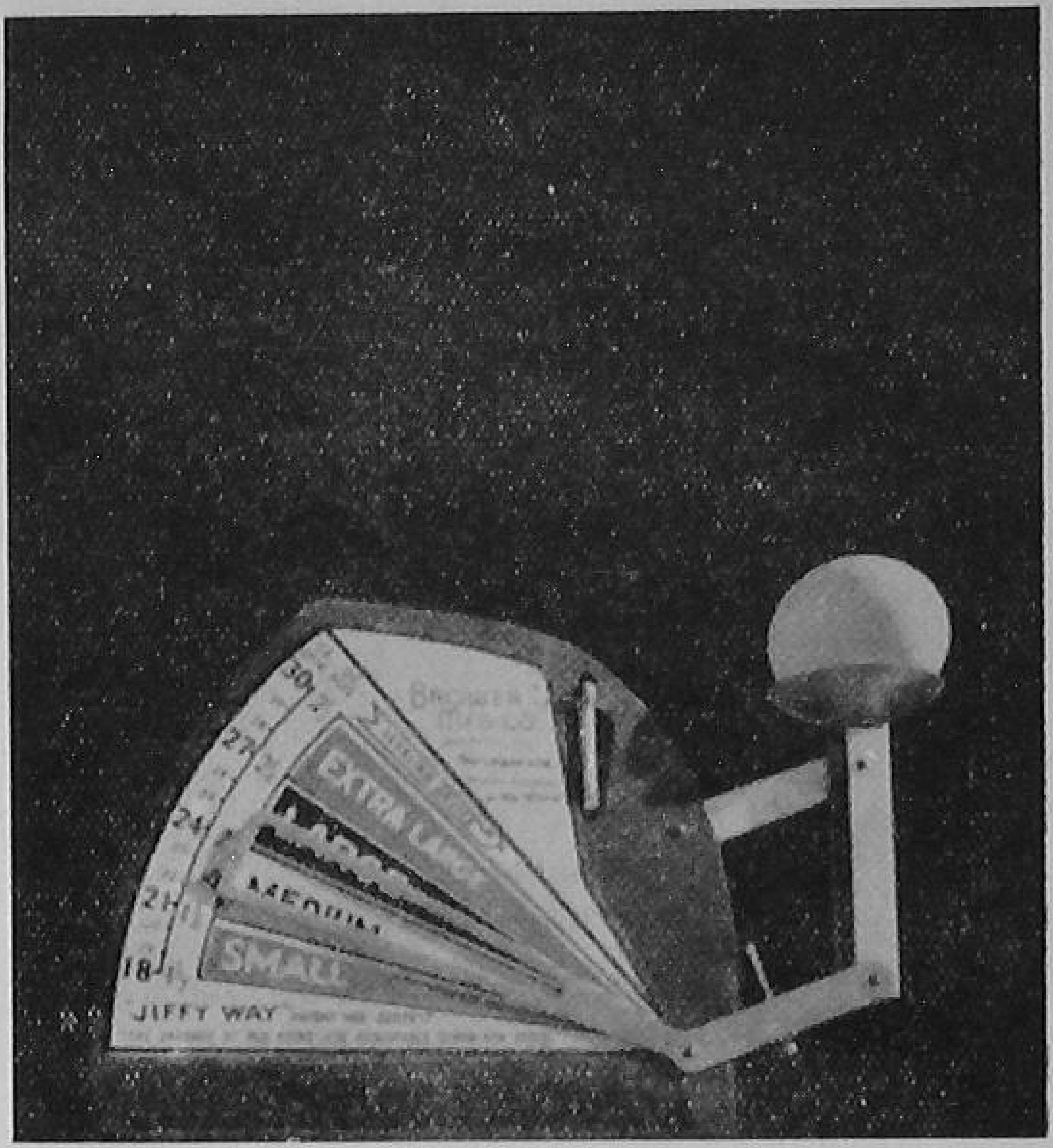
Ample sunlight is another important need for birds. So are green feeds.

Don't expect good hatchability from very young pullets, or from breeders of low vigour, or from very fat birds.

Overcrowding, keeping birds in unhygienic surroundings and poor sanitation—all lower hatchability.

SEASON

You won't get good hatchability in the hot summer months when you artificially



A two-ounce (normal-sized) egg hatches better

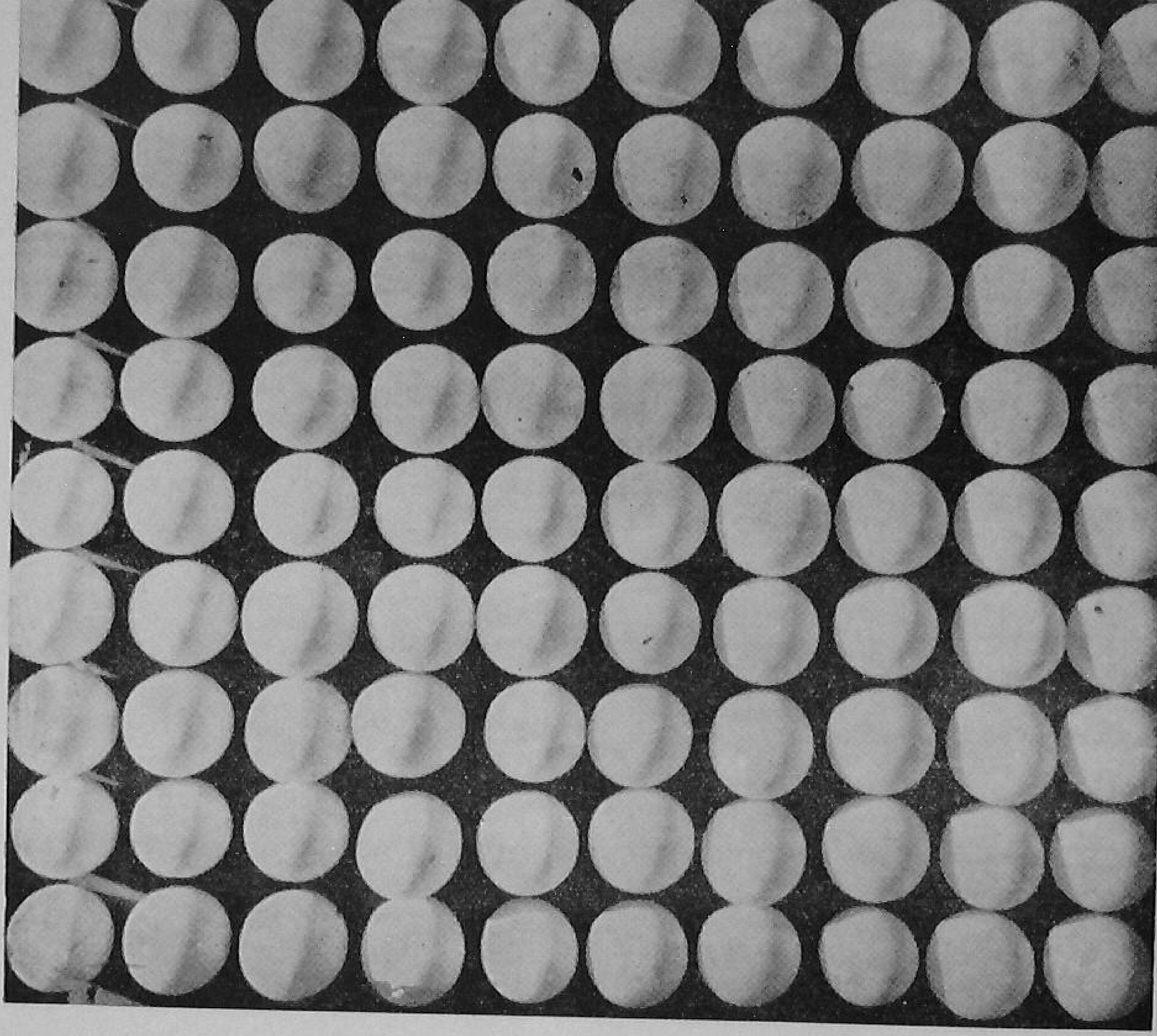
incubate eggs. In the *loo* season, hatchability of even the best birds can go down.

Hatchability is good during the laying season of November to March.

EGG SIZE

The size of the eggs, birds lay, varies. Even in a single bird, the size of the eggs laid may also differ. But there is a standard size of eggs for each breed. Normal-sized (two ounce each) eggs always hatch better. Too small or too large eggs do not hatch well.

The shape of the egg has nothing to do with its hatchability, nor its colour. The width, length or shell thickness also do not



Set only the selected eggs for a good hatch

affect hatchability. However, eggs with sound shells hatch better than those with defective shells.

Candle eggs before hatching and reject those which are not of proper size and those which show defects, or meat or blood spots in them.

Since disease such as pullorum kills the developing embryo, better test the laying birds for such diseases, and get rid of those which carry the disease.

Fresh eggs or eggs stored in temperatures of 50° to 60° F for not more than a week give good hatching results.

And, while incubating eggs, see that you maintain the required temperature, humidity and ventilation, and turn the eggs at the right time. If you neglect these, even the best eggs from the best birds will hatch but poorly.

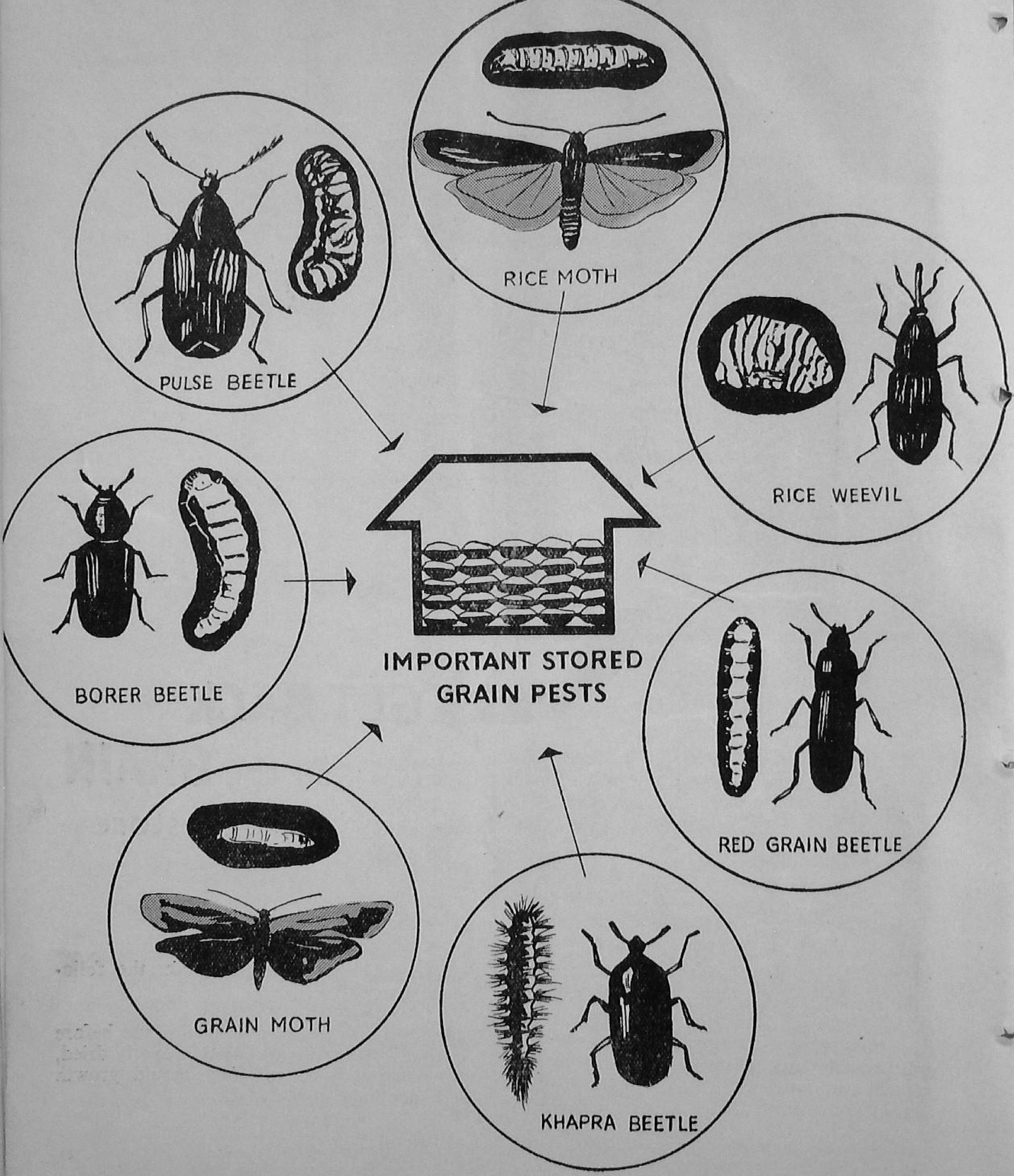
GET BACK all the GRAIN you store

Do you get back all the grain you put in the store ? Most people do not.

Insects, rats, dampness, change of temperatures destroy a part of it. Sometimes losses amount to 15 to 20 per cent of the grain you stored.

To get back all the grain, take the following steps :

- Dry the grain well in the sun before storing. If the grain is not properly dried, the moisture in it will help mould growth and encourage insect attack.


RICE MOTH
PULSE BEETLE
RICE WEEVIL
BORER BEETLE
IMPORTANT STORED GRAIN PESTS
RED GRAIN BEETLE
GRAIN MOTH
KHAPRA BEETLE

● After a thorough drying, put the grain in gunny bags, preferably new. If old bags have to be used, clean and disinfect them before you put the grain in. Old bags often carry pests.

● Clean the godown thoroughly —the walls, ceiling, floor, doors and windows. Collect the sweepings and screenings and destroy.

● Fill up cracks and crevices and rat holes by plastering. To plug the rat holes, first fill them up with broken glass pieces and close with cement.

● Fix six-inch wide tin sheets on the upper and lower six inches of the doors, windows and ventilators to safeguard against rat infestation.

● Better get the godown white-washed after cleaning.

● Spray the godown with two per cent DDT.

● Lay a suitable dunnage on the floor before stacking the grain bags to prevent damage due to moisture. A dunnage of straw (six-inch thick layer) or wooden planks will be good for bagged grains.

● Place the bags on the dunnage in a well-laid-out stacks. While stacking, leave sufficient space between the stacks and the walls. This will make moving the bags and checking up from time to time easy.

● After the bags have been stacked, dust five per cent BHC on the grain bags at eight ounce per 100 square feet of the stack surface.

Your job does not end here. Aerate the godown on dry days by opening the windows and ventilator. Inspect the godown every fortnight. In case you notice any insect pest in the bags or in the grain, arrange for the fumigation of godown. For this you need expert help. Ask your Gram Sevak how this can be arranged.

These steps will help you cut down storage losses, and get back all the grain you store.

FILMS ON LOAN

The Farm Information Unit of the Directorate of Extension has a library of films and filmstrips on agriculture and Home Science subjects. Membership is free. These films are given on loan, free of charge, to members of the library. For details regarding membership and films and filmstrips available, please write to the Librarian, Farm Information Unit, Directorate of Extension, Krishi Bhavan, New Delhi-2.

We welcome your

QUESTIONS
and
SUGGESTIONS

Address them to

EDITOR

'EXTENSION'

Directorate of Extension
Ministry of Food and Agriculture
Krishi Bhavan
NEW DELHI

USE YOUR AUTUMN POTATOES FOR SPRING PLANTING

EACH spring, potato-growers have to spend a lot of money to get seed from the hills for sowing.

This is because they cannot use the tubers from autumn crop, as the fresh tubers do not make good seeds. These tubers have to be given a rest for some months before they can germinate properly.

Recent investigations, however, have shown that the fresh tubers from any local variety can give good germination, provided you treat them with a one per cent solution of thiourea before planting. Such a treatment will break the dormancy in the freshly-harvested tubers and make the buds active. Result ? They will germinate satisfactorily when sown.

You can get the chemical from the Agricultural Department. It costs about seven to eight rupees a pound. And you don't need more than two pounds for treating seeds for planting an acre.

To prepare the solution, dissolve one part of the chemical in a hundred parts of water in a bucket or tub.

Before treating the tubers in this solution, wash them to remove the mud sticking to them. Then dry by spreading them thinly on a sand layer. Cut the tubers into seed pieces ; each piece must have one or two eyes and weigh 1/4 to an ounce. If you are using whole tubers, make two or three shallow cuts on the tubers.

Soak these pieces or whole tubers in the solution you have prepared for an hour. Don't remove the seed pieces with your hands. Instead, pour the solution (along with the seed) through a hessian cloth having wide meshes into a bucket. Remove the tuber pieces and use the solution again.

Better plant the tubers in the moist soil immediately after treating. If, however, planting has to be delayed for some reason, spread the treated pieces thinly in the shade to let the surface dry. And, don't delay the planting time more than what it is absolutely necessary.

So this time, use your autumn potato seed for the spring crop and see how much money you can save, compared to what you spend when you buy seeds from the hills.

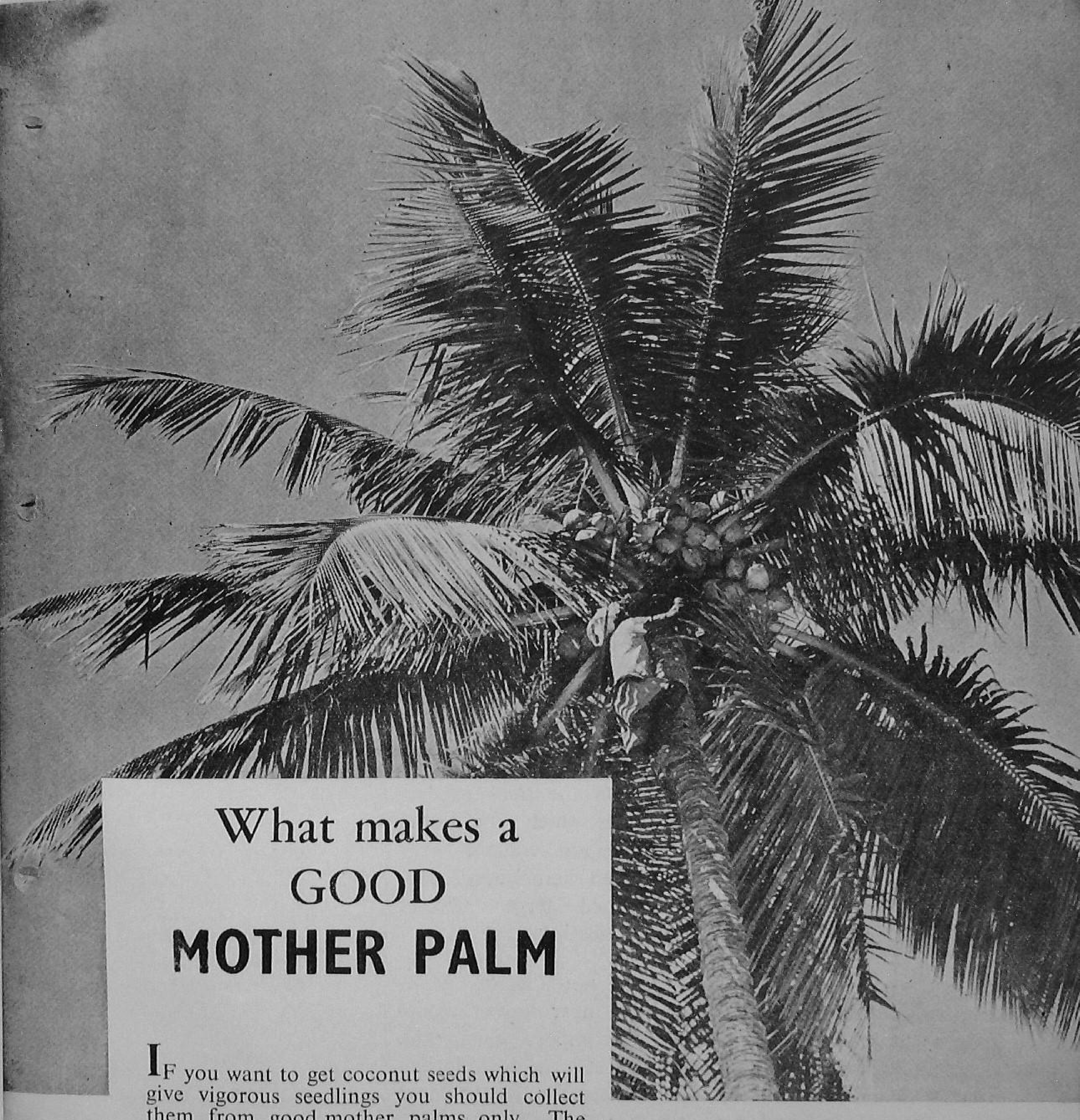
The Kerala Farmers'

FERTILIZER GUIDE

HERE IS A GUIDE THAT GIVES THE KERALA FARMER AT A GLANCE WHAT AND HOW MUCH OF FERTILIZERS TO USE FOR IMPORTANT CROPS HE RAISES

Crop and Soil	*Dose in pounds per acre*			*Mixture grade* Nitrogen (N) Phosphoric acid (P_2O_5) Potash (K_2O) Figures in brackets show the percentage of water soluble phosphoric acid
	Nitrogen (N)	Phosphoric acid (P_2O_5)	Potash (K_2O)	
RICE The three rice crops raised in the State are : *Viruppu* or first crop (April-May to August-September) *Mundakan* or second crop (September-October to January-February) *Punja* or third crop (December-January to March-April)				
Sandy soils and sandy loam soils				
(First crop or *Viruppu*)	20	20	20	
Basal dressing	10	20	20	
Top dressing	10	—	—	9 : 9 (4.5) : 9
(Second crop or *Mundakan*)	30	30	30	
Basal dressing	15	30	30	
Top-dressing	15	—	—	5 : 10 (5) : 10

Clay loam soils				
(Kuttanad and similar areas)	30	40	20	
(Third crop or *Punja*)	20	40	20	
Top-dressing	10	—	—	7 : 14 : 7
Laterite soils				
(First crop or *Viruppu*)	30	30	30	
Basal dressing	15	30	30	
Top dressing	15	—	—	5 : 10 (5) : 10
(Second crop or *Mundakan*)	40	30	30	
Basal dressing	30	30	30	
Top-dressing	10	—	—	9 : 9 (4.5) : 9
COCONUT (per tree)				
Sandy (sandy loam soils)	0.5	0.5	1.0	
Laterite soils	0.5	0.5	1.0	
Clay loam (Kuttand and similar areas)	0.5	0.5	1.0	8 : 8 : 16
TAPIOCA	50	50	100	8 : 8 (3) : 16
BANANA (per plant)	0.5	0.5	0.5	9 : 9 (4.5) : 9
GINGER	50	50	100	8 : 4 (4) : 16
PINEAPPLE	100	50	200	8 : 4 (4) : 16
ARECANUT	50	25	100	8 : 4 (4) : 16
SUGARCANE				
Factory areas of Thiruvalla and Pandalam	100	80	100	9 : 7 (3) : 9
Other areas	150	75	75	12 : 6 (3) : 6
PEPPER (per standard)	0.2	0.3	0.15	7 : 10 (5) : 5
GROUNDNUT	10	30	30	3 : 9 (9) : 9
CARDAMOM	40	40	40	9 : 9 (4.5) : 9
COTTON				
Irrigated	40	40	40	9 : 9 (4.5) :9
Rainfed	20	20	20	
Sea Island	40	30	50	8 : 6 (3) : 10



What makes a GOOD MOTHER PALM

If you want to get coconut seeds which will give vigorous seedlings you should collect them from good mother palms only. The mother palms you select should be healthy, middle-aged and good bearers. It is better to select them from rain-fed gardens which have a large number of such trees.

Here are the things you should look for in a good mother palm.

One. The palm you select should bear regularly as well as heavily. It should give

about 100 nuts or at least 80 a year. If you count all the nuts on the tree for wot years you will know its yielding capacity. Also, a high-yielding mother palm will always have 30 or more fully opened leaves in its crown. Usually, a large number of leaves in the crown and bunches having many developing nuts are considered to be the sign of a high yielder.

Two. Examine the characteristics of the leaves. The leaves of a good palm should have short and thick petioles, a wide leaf base and be firmly attached to the stem. The disposition of the leaves in the crown should be such that they can provide support to the developing bunches.

Three. If the palm is a good one, it should produce inflorescences in every leaf axil and have a good number of female flowers in them. There should be, at any time, at least 12 bunches having nuts at different stages of development on the crown. The bunch stalk should be short, thick and strong, and not thin, long or showing the sign of bunching or drooping down.

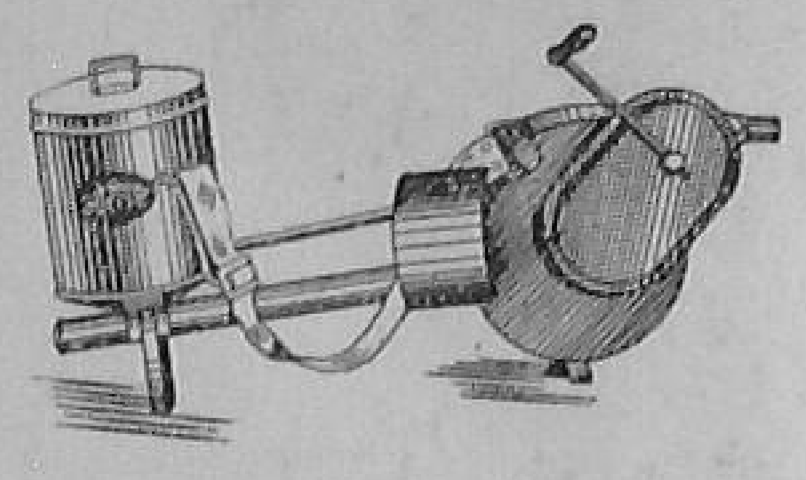
Four. The size and shape of the nuts the mother palm bears is also important. Better select palms which bear medium-sized, round or oblong nuts. Such trees have been found to yield high and generally give nuts containing more copra. Such nuts also germinate better. Avoid those trees which bear long, narrow and bigger or smaller-sized nuts than normal. If, however, you are growing husked coconuts, select trees that yield big-sized nuts having thick kernel in them.

In case, you cannot mark out all the mother palms you want having all the good points, see that at least they yield a large number of good quality nuts which are free from defects.

Reject the trees producing nuts which are empty or do not contain well-developed kernel inside, also which shed a large number of undeveloped nuts.

Do not select palms growing near houses, cattle-sheds, compost pits, tank bunds, etc., as it will then be difficult for you to know whether the palms are really good ones or are producing well just because of favourable conditions.

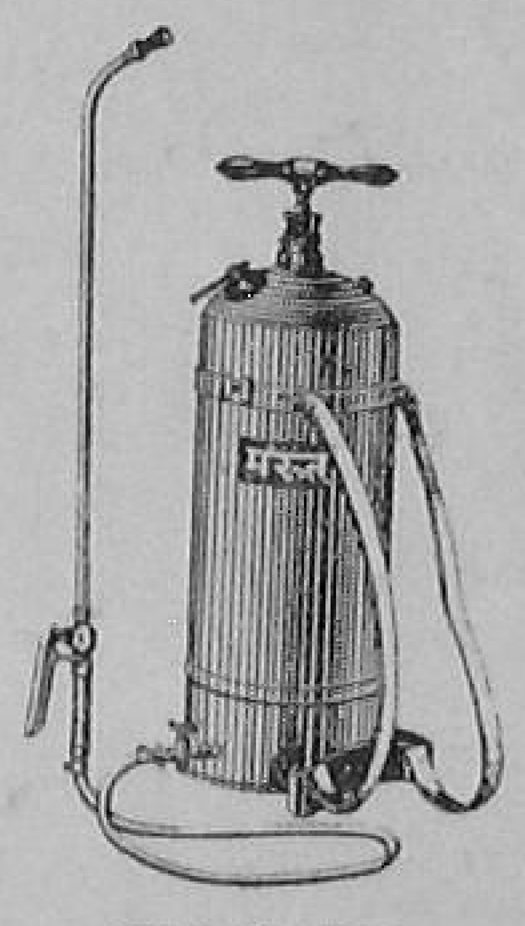
BEST INDIAN MAKE
DUSTERS & SPRAYERS



ORIENT

HAND ROTARY DUSTER
SUITABLE FOR DUSTING ON

Field Crops, Stables, Godowns, Anti-Malarial Work & Control of Blister Blight of TEA & COFFEE !



MARUTI

FOOT SPRAYER

For spraying on tall trees, coffee, mango, orange and apple trees.

Two spray attachments can be fitted with any length of delivery hose upto 500 ft.

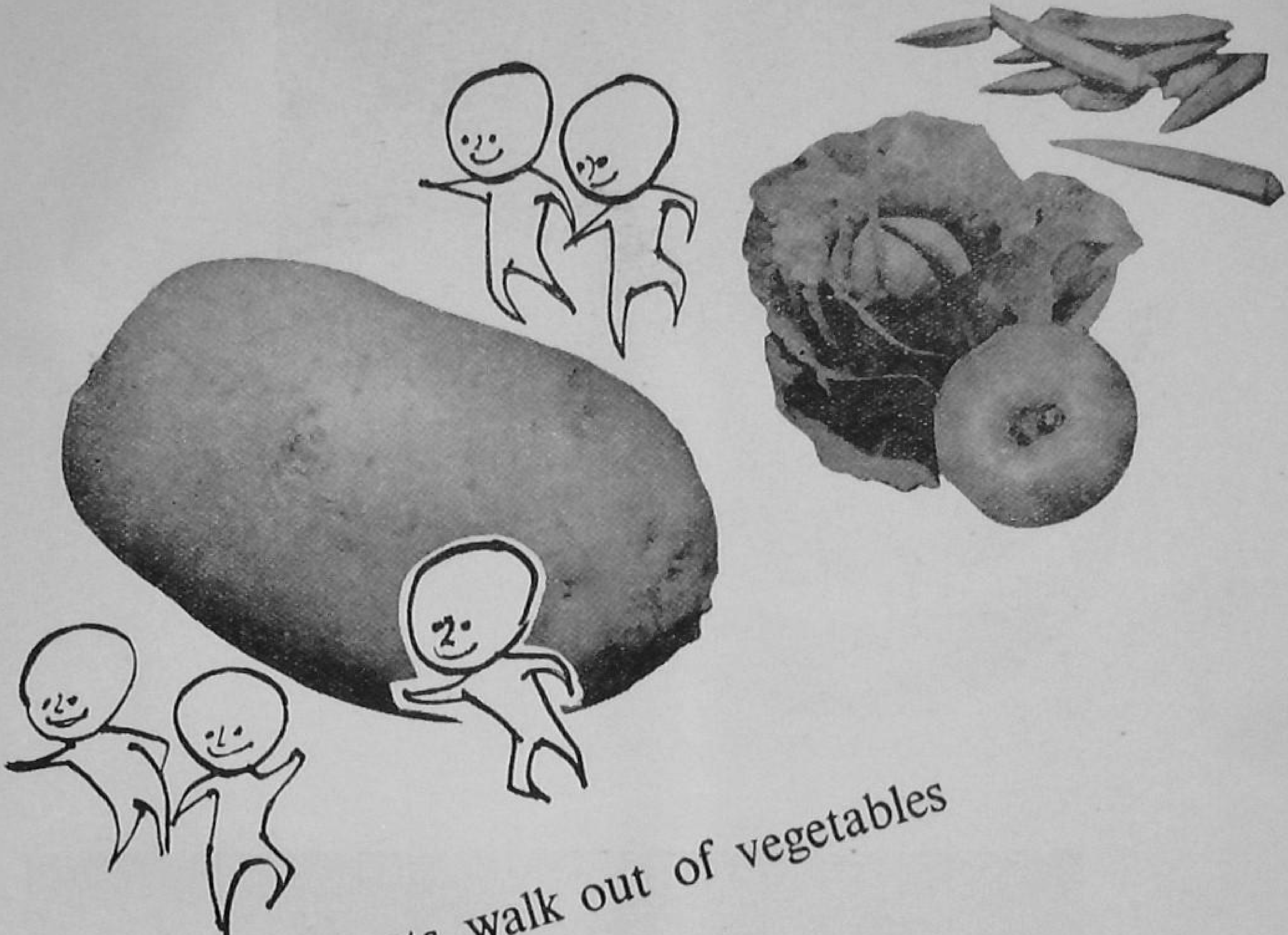
Manufacturers :-

AMERICAN SPRING & PRESSING WORKS (PVT.) LTD.

MALAD-BOMBAY-64

Phone : 84221
84245

Gram : KILLOCUST
MALAD



Don't let Nutrients walk out of vegetables

By KAMLESH PURI

IF you want to get good nutrition from vegetables, you should not allow the nutrients in them to 'walk away.'

Vegetables are an important food. They contain vitamins and minerals, but these are lost when vegetables are washed in water and not cooked in a proper way.

When you expose the cut surface of the vegetables to water, a great amount of vitamins and mineral salts get into the water and are lost.

Therefore, make it a practice to cook vegetables in their jacket, when you are not using the water for any other preparation. The outer skin prevents the nutrients from dissolving in the water.

Of course, you have to wash vegetables even when they are from your backyard. This you do to wash away the dirt or germs. When there is an epidemic or disease, wash them in potassium permanganate (pinkie).

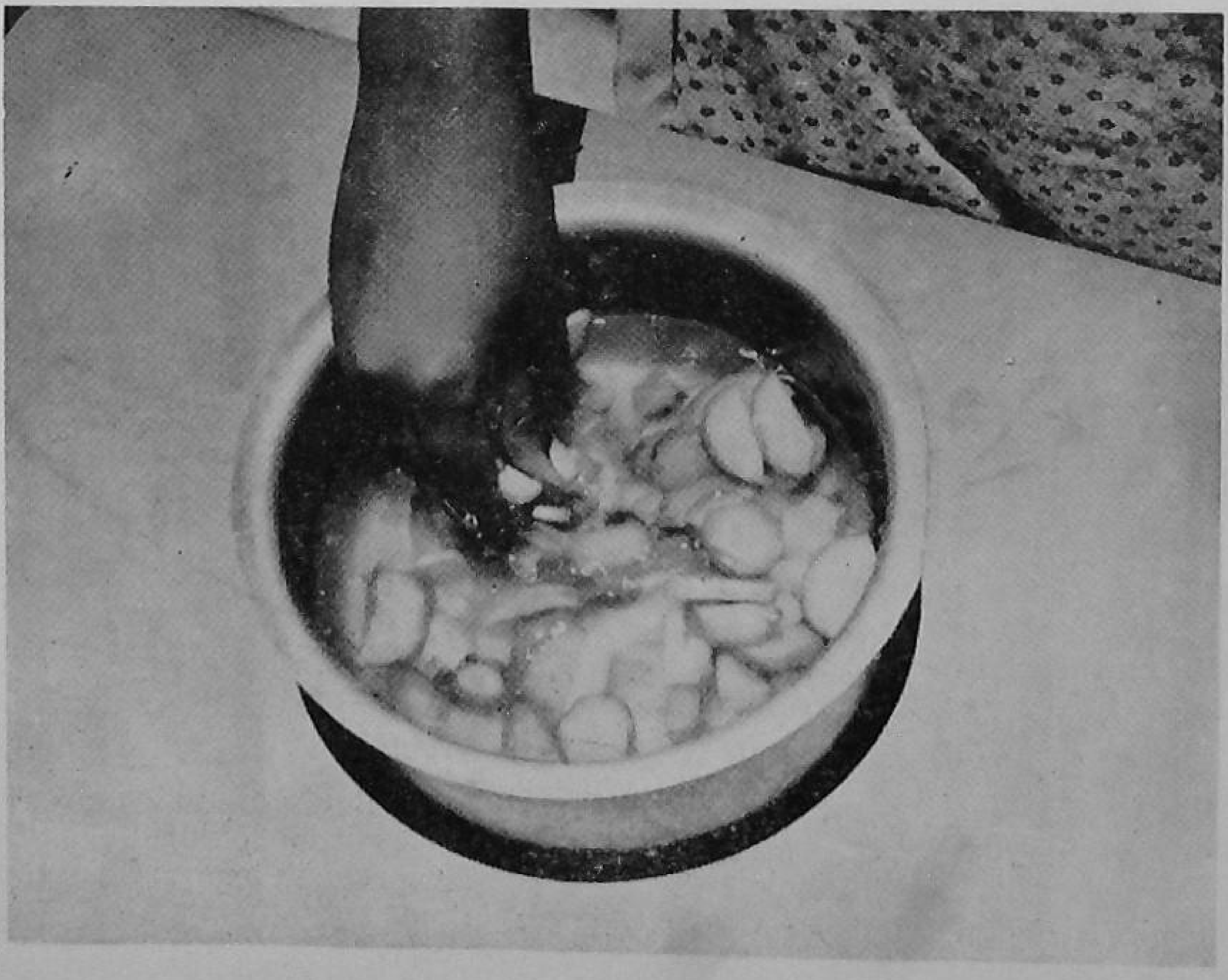
Here is the right way of preparing the vegetables :

Number one rule is to prepare vegetables just before cooking. Don't let the cut surface remain exposed to the air for a long time.

Wash vegetables thoroughly in cold water.

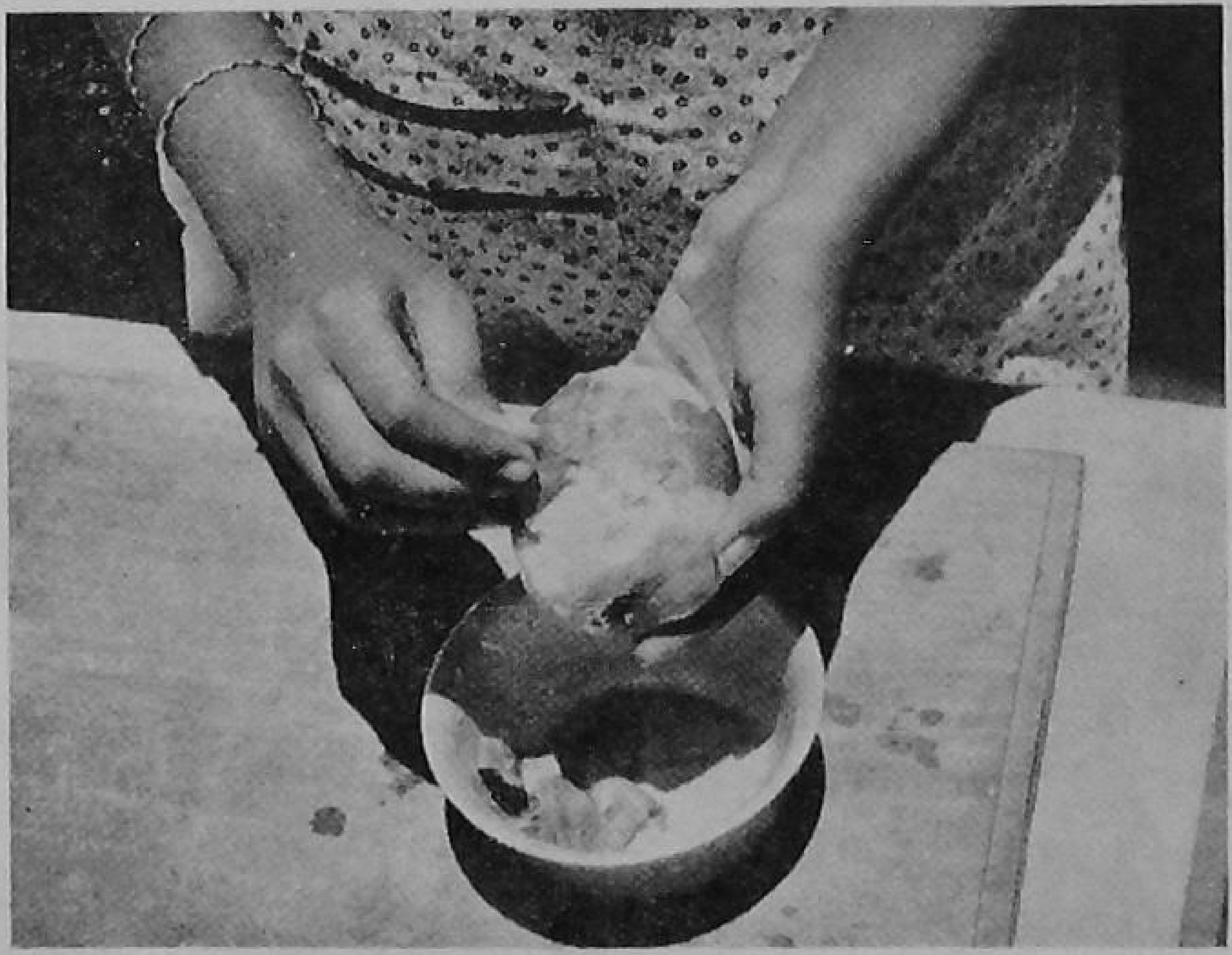
Never wash them after they have been cut.

Wash vegetables you must. But wash them only before cutting them...



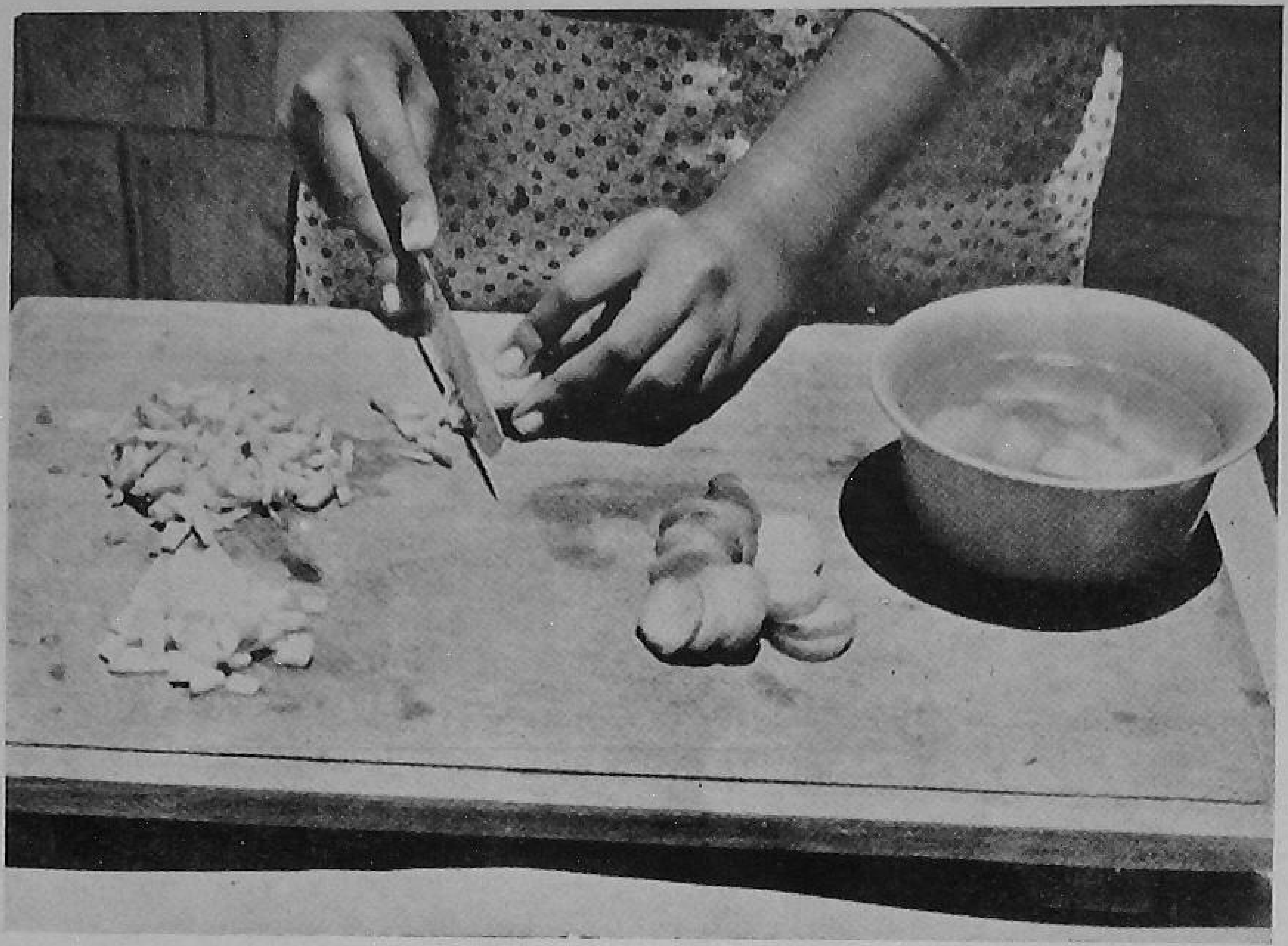
...and not after you have cut them

Pair vegetables very thinly

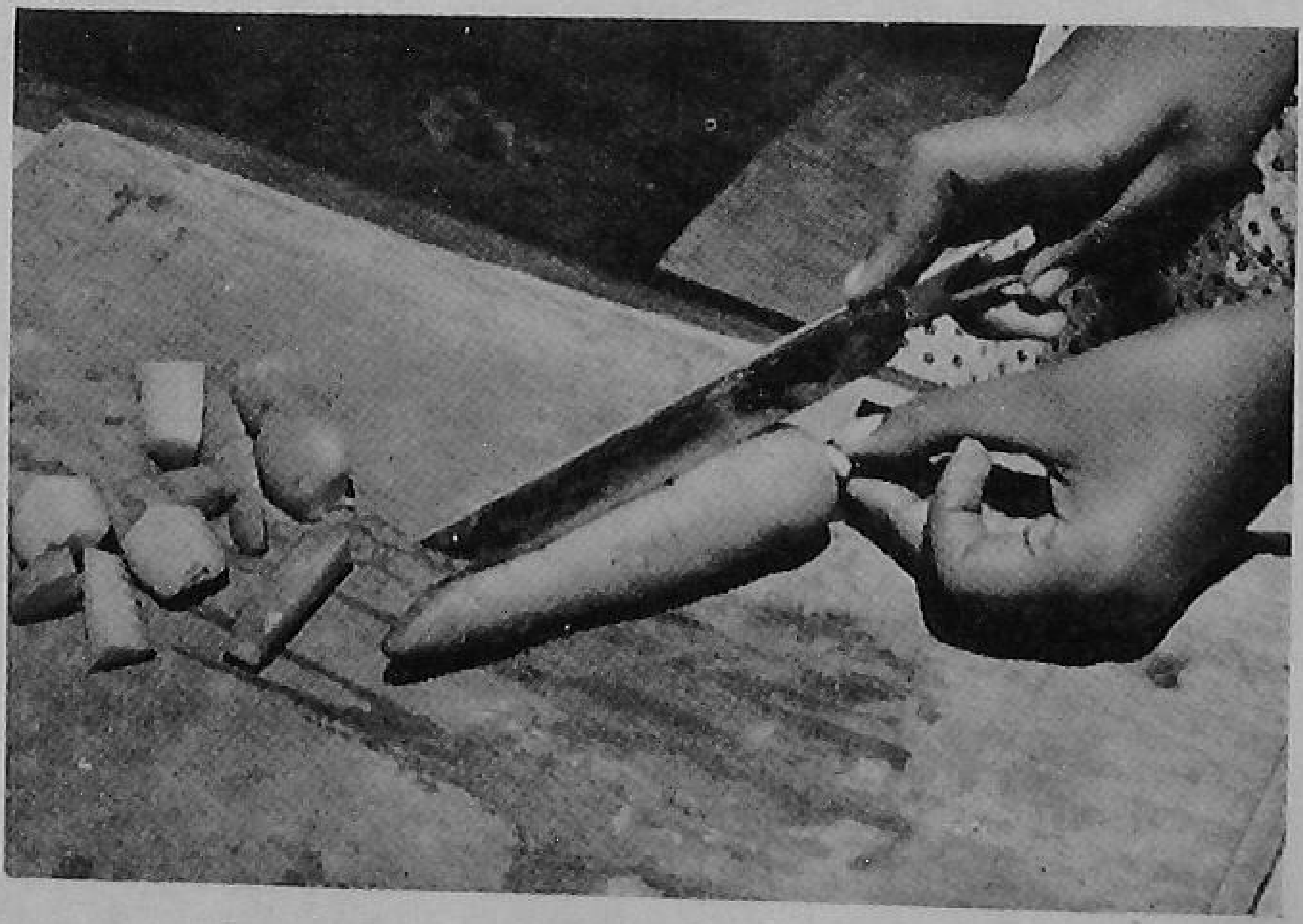


Peel potatoes, arbi, *etc., after boiling*

Never remove a thick peeling



Better cut the vegetables on a chopping board



Cut with the knife blade pointing away from you

Pair vegetables very thinly—if they need paring.

Peel vegetables like potatoes, sweet potatoes, *arbi*, yam, peas after boiling.

Never remove a thick peeling.

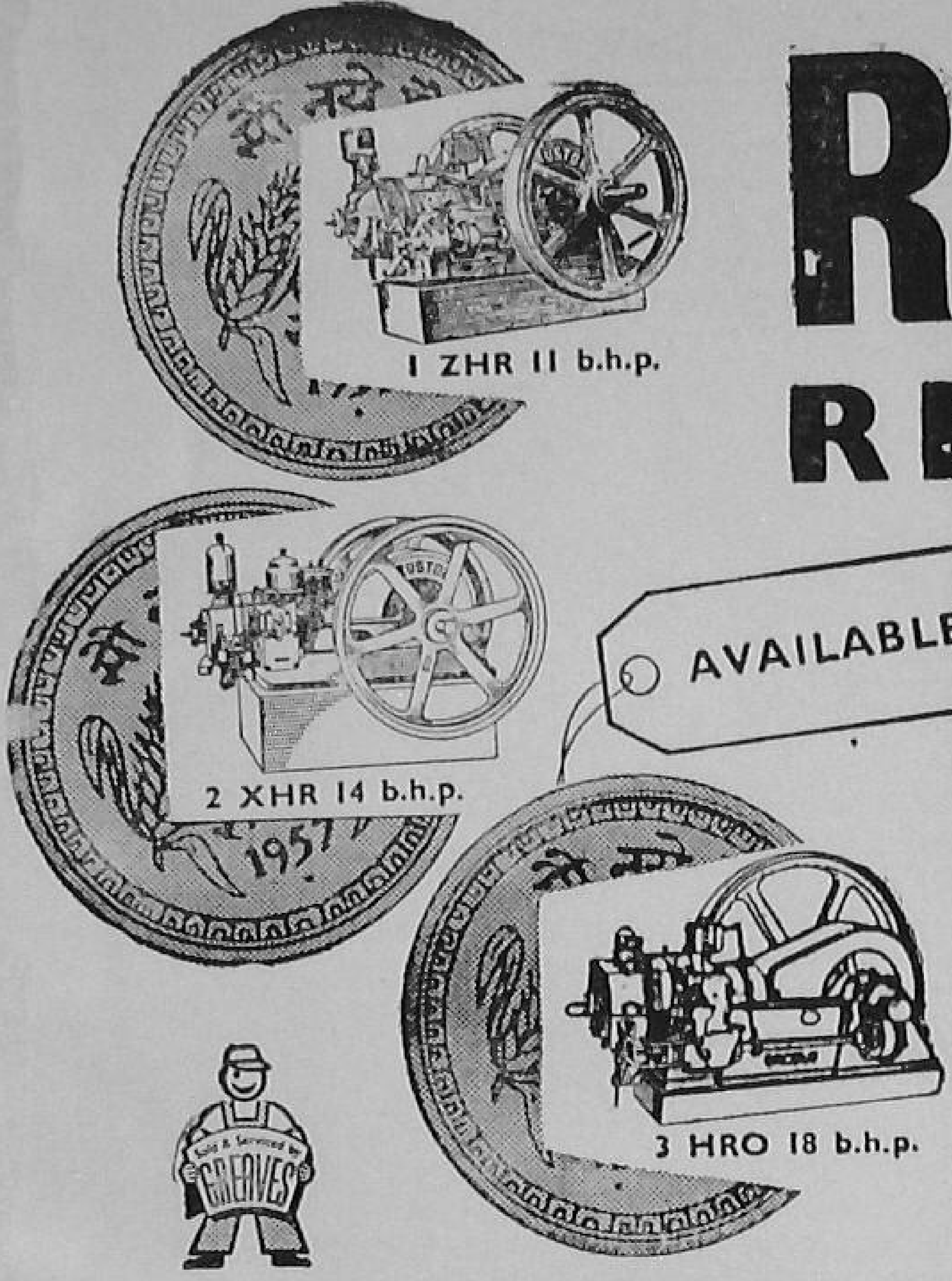
Cut vegetables on a chopping board. Hold the vegetables in your left hand. Cut with the knife blade pointing away from you. Otherwise, you run the risk of cutting your hand or finger.

Place the cut pieces in salt water. This way vegetables won't become dark.

Cook your vegetables immediately. Don't cook for a long time.

With this much of care, you have the nutrients intact.

The help rendered by the Principal, Shri Avinashlingam Home Science College, Coimbatore, in preparing the article is gratefully acknowledged.



RUSTON RELIABILITY

AVAILABLE EX-STOCK

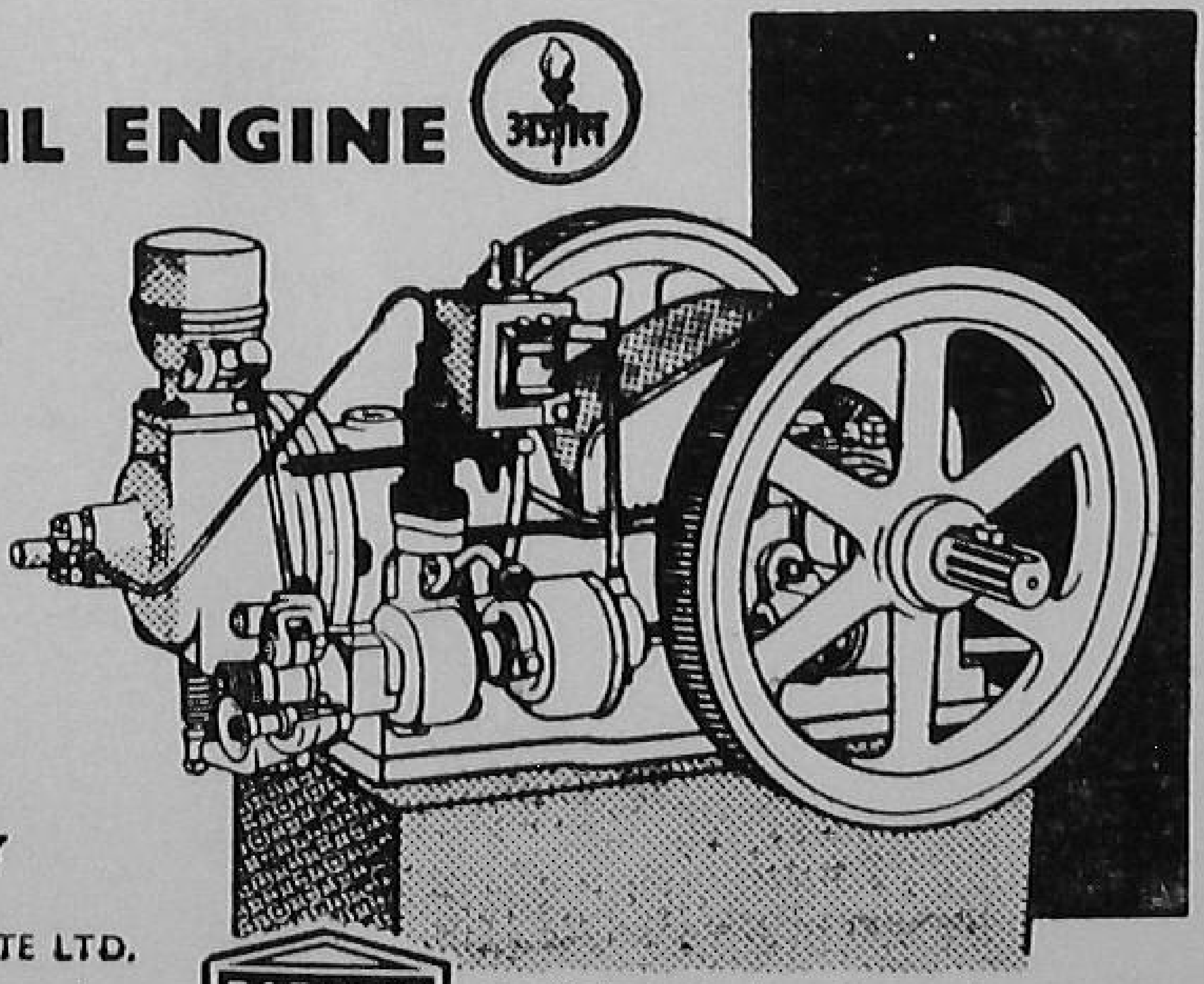
The farmer depends on the reliability of his water supply for his profit – not on the first cost of his engine. That is why he chooses Ruston Oil Engines.

GREAVES COTTON & CO LTD

BOMBAY • MADRAS • NEW DELHI • BANGALORE
AHMEDABAD • COIMBATORE • KANPUR

ajanta GC/61-6

AJEET OIL ENGINE



This heavy duty,
slow speed engine is
• Economical ★ Dependable
★ Robust ★ Easy Starting
and will give you years of
steady, dependable service.

Manufacturers :
M/s. Patel Mavji Kanji & Bros.
Rajkot (Saurashtra)

Sole Selling Agents :
BATLIBOI & COMPANY
Props
BHOGILAL LEHERCHAND PRIVATE LTD.

BATLIBOI participants in planned progress

55/5, G.B. Road, New Chowri, Delhi
"Super House", G.T. Road, Millerganj, Ludhiana

BAY-12A

Published by the Farm Information Unit, Directorate of Extension, Ministry of Food and Agriculture, Krishi Bhavan, New Delhi and printed at the Asia Press, Netaji Subhash Marg, Delhi-6

Regd. No. D-1180

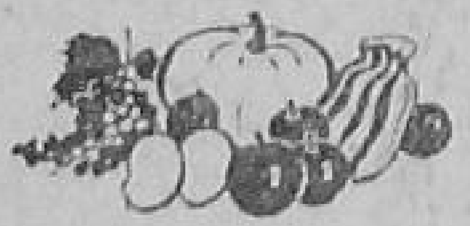
LEAFLETS
FOR PROGRESSIVE FARMERS

FARMING

Treating seed before sowing
Protect your soil
Better implements for a better rice crop
How to treat paddy seed
Better level and bund your field
Raise a better barley crop
Getting good gram yields
The way to higher wheat yields
Late blight of potatoes
How to make silage
Choose your irrigation method
Better grow berseem
How to make paddy straw a better cattle feed
Grow maize the improved way
Five fodder grasses that you can grow

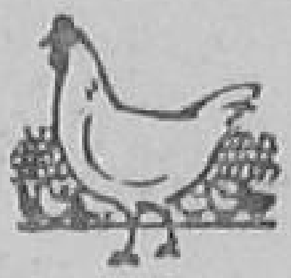
MANURES AND FERTILIZERS

Compost is easy to prepare
Green manuring
How to use fertilizers
Facts about fertilizers
Water hyacinth gives a good compost
Giant Hemp is a good green manure crop



HORTICULTURE

Papaya is easy to grow
Drumstick, the year-round vegetable
Growing grapes in south India
Rabi vegetables—grow them this way
How to grow paying pineapples



POULTRY

How to fight coccidiosis in poultry
Protect your poultry birds against Ranikhet
Save your fowls from tick fever
Fighting fowl pox in poultry
How do you transport your poultry birds ?
Watch out for pullorum
Culling poultry for profit
How to make a brooder for your chicks
How to start a poultry farm
How to control lice on poultry
Tapeworms in poultry
Your chickens and infectious coryza
The egg and you
Making eggs keep fresh
How to pack eggs for transport
Selecting poultry birds for breeding
Selecting birds for poultry show
Moulting in poultry
Poultry keeping for egg production
Feeding poultry for profit
Do your hens pay ?

PLANT PROTECTION

Kill the rat and save your grain
Control loose smut and earcockle of wheat
Controlling paddy pests and diseases
The rice bug
Get rid of white ants

ALL LEAFLETS ARE 10nP. EACH

Send your order with remittance to :

THE BUSINESS MANAGER
FARM INFORMATION UNIT, DIRECTORATE OF EXTENSION
MINISTRY OF FOOD AND AGRICULTURE
KRISHI BHAVAN, NEW DELHI

A COMPLETE LIST OF PUBLICATIONS IS AVAILABLE ON REQUEST